

## N O T I C E

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Heat capacity Mapping Mission (HCMM) Program

Investigation HCMM - 050

STUDY OF GEOLOGICAL STRUCTURE OF SICILY AND OTHER ITALIAN AREAS

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Third progress report - June 1980

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TYPE II

## I. Foreword

We refer to our second progress report (January 1980) and, in particular, to the first map of A.T.I. obtained in the area along the Gulf of Orosei (Eastern Sardinia).

While waiting for other CCF's that could allow the determination of A.T.I. in the same and in other areas, a ground survey has been accomplished along the profiles of fig. 1 (fig. 4 of the 2nd report). The ground truth has been collected in order to try to explain the A.T.I. and thermal anomalies observed.

In fig. 1 the points where the relevant observations have been made and samples collected for further laboratory examination are marked with arrows and progressive numbers.

## II. Ground truth collected along the profiles of fig. 1 (numbers correspond to arrows)

1) The outcropping formation is a very acid pegmatitic granite.

The topography is flat and the vegetation is almost missing. Very thin soil cover, almost non-existent. Alteration sands present in part of the area.

2) A morphological change (from flat areas to hills or typical plateaux) corresponds to the contact between granites and basalts.

3) The pattern illustrated in sketch n. 1 could be the reason for the increase of the A.T.I.

4) The situation is illustrated in detail by the sketch n. 2. The anomaly can be originated by the strong contrast between the bare exposure of granite and the dolomites covered by high vegetation.

5) The observed area is located on a high plateau covered by an uniforme blanket of mediterranean vegetation. A small swamp area of 300 x 200 m could influence the A.I.I. The graniti facies is aplitic; therefore the alteration sands are much finer than at point 1 (see sketch n. 3).

6) The situation is here very clear. The vegetation reaches the highest density of Sardinia. A deep valley cut in limestones and covered by tall tress runs in NE-SW direction.

III. The collection of ground truth is continuing along other profiles.

R. Cassinis, P.I.



Figure 1 caption:

Profiles (see for position fig. 2 of the second progress report).  
The arrows represent the ground truth collection points illustrated in paragraph II).

Encl.: 3 pages of figs.



WSW

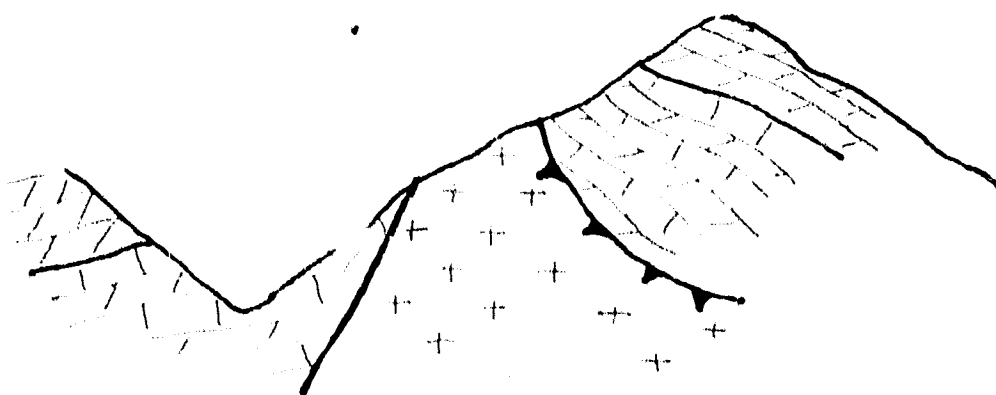
ENE



Geological sketch n.1

W

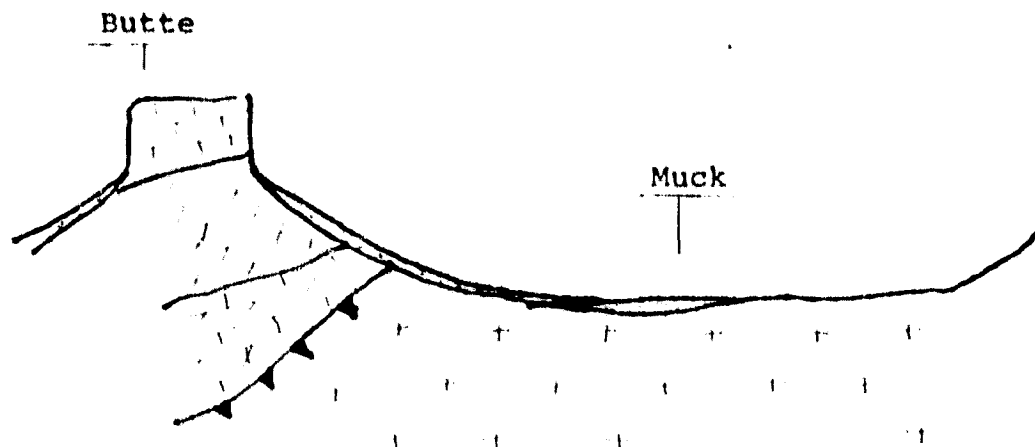
E



Geological sketch n.2


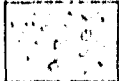
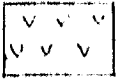
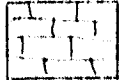
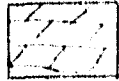
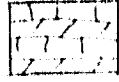



NW

SE



Geological sketch n.3

LEGENDA

- |   |  |
|---|--|
|   | Present clayey deposits by surficial running waters ( Muck )   |
|    | Scree deposits (Talus)   |
|    | Neogenic basalts   |
| <div style="display: inline-block; vertical-align: middle; transform: rotate(-90deg); transform-origin: left top;">Mesozoic</div> <div style="display: inline-block; vertical-align: middle; font-size: 3em; margin-left: 5px;">{</div> |  Carbonates           |
|   |  Dolomites            |
|   |  Dolomitic limestones |
|    | Hercynian granites   |
|    | Overthrust   |
|    | Main fault   |